



Africa RISING Project of the Ethiopian Highlands: An Overview on R4D Activities

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ILRI

Landscape/watershed management cross-site visit
program

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FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative



USAID
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1. Location





2. Diagnosis/ systems understanding - 2012

- Telephone survey
- Livelihood survey using SLATE
- Participatory Community Analysis (PCA)
- IMPACTlite survey: Household detailed characterization
- Survey on Agro-ecological knowledge, community knowledge groups – AKT5 tool
- FEAST and TECHfit
- Market/ Value chain studies



3. Systems understanding + on-farm research- 2013

- Building links and trust with the farming communities
- Employed site coordinators
- On-farm action research with 72 hhs- potato, wheat and faba bean PVS
- Some research activities on animal feed
- Crop and soil based on-farm fertilizer research in the 4 AR sites
- Formulated 7 research themes and developed 33 action and exploration oriented research protocols (end of the year and beginning of the next year)



Africa RISING work plan – key themes

1. Feed and forage development.
2. Field crop varietal selection and management.
3. Integration of high value products into mixed farming systems.
4. Improved land and water management for sustainability.
5. Improving the efficiency of mixed farming systems through more effective crop-livestock integration.
6. Cross-cutting problems and opportunities.
7. Knowledge management, exchange and capacity development.



4. Implemented more action oriented interventions -2014

- Irrigated/rain-fed fodder production and sheep fattening
- Fodder trees/shrubs
- Stepwise intensification of faba bean/forage intercropping
- Crop residue management and utilization
- High value fruit trees
- Improved management practices and soil-test based nutrient amendments - bridging yield gap
- PVS on five major crops
- Community based seed production on 3 major crops
- Raised bed/ ridges and furrow for SWC and agri intensification
- Mechanized seeding - seeder fitted on a two-wheel tractor

High value fruit trees (avocado and apple)



Avocado- Lemo



Apple- Sinana

Fodder and soil improving tree/shrub species



Tree lucerne in Endamehoni



Tree lucerne in Sinana

Irrigated/
rain-fed
fodder and
sheep
fattening



Crop residue management- Storage, processing and feeding options



Stepwise intensification of faba bean/forage intercropping



Trifolium in faba
bean field for
dry season
supplementary
animal feed -
Basona



Supplementary
feeding- weeds
from local faba
bean growing
field- Basona



Addressing yield gap through improved management practices (Sinana)



Addressing yield gap through soil test-based nutrient amendments (Sinana)



20 10 2014

PVS - faba bean
(Endamehoni)



PVS - Wheat (Sinana)

Project Name: Africa RISING
CIMMYT/CIP/ICARDA Research Protocol
Trial Name: Wheat PVS
Variety: Honkolo (ETBW5879)
Planting Date: 05/08/14
Seed rate: 100kg/ha
Fertilizer rate: 100kg/ha DAP & 50kg/ha
Urea

19.11.2014

PVS - Food barley (Sinana)



19.11.2014

PVS - Potato (Lemo and Sinana)



Community based seed production - improved wheat, potato and faba bean varieties



Raised bed/ ridges and furrows (Endamehoni)



Mechanized seeding (Basona)



Enset based intensification (Lemo)



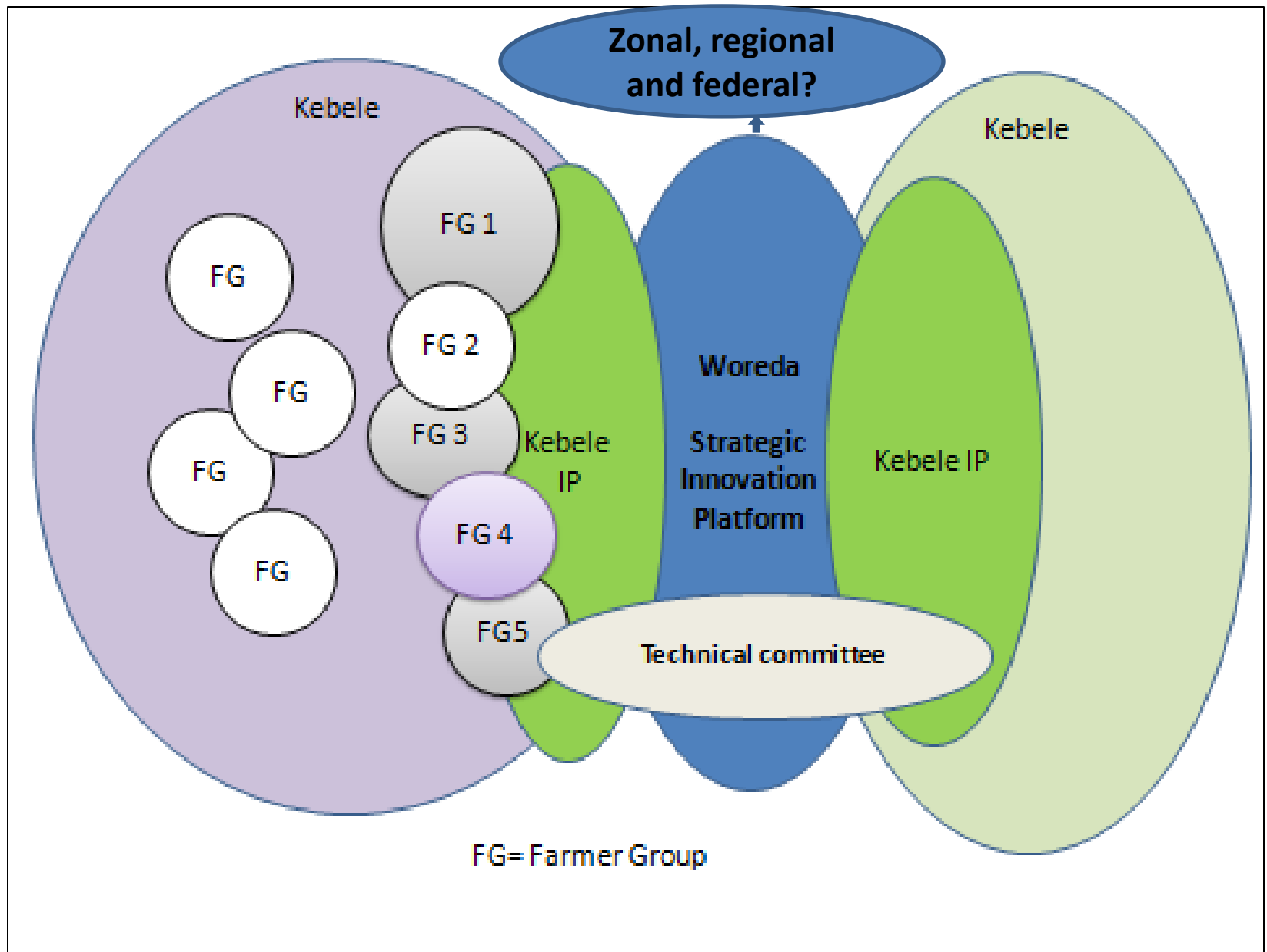
- Baseline survey
- Studies on existing enset production systems
- Introduction of integrated interventions
- Community based integrated disease and pest management

Farmers participating in different AR on-farm adaptive/ action oriented research protocols

Category of farmers	Basona	Endamehoni	Lemo	Sinana
Participants in the implementation of 4 protocols and more (%)	0.0	1.3	2.0	2.1
Participants in the implementation of 3 research protocols (%)	5.6	9.1	13.4	9.3
Participants in the implementation of 2 research protocols (%)	27.5	15.6	18.8	26.9
Participants the implementation of a single research protocol (%)	66.9	74.0	65.8	61.7
Total number of farmers	160	154	202	193
Female headed households (%)	20.0	23.4	16.8	16.1

Total number of farmers engaged in the on-farm research are > 709

Africa RISING R4D IPs - 4 sites and 8 research kebeles



Capacity development

AR sites	Partners	Field-days on d/t interventions	Trainings within & outside the site	Workshops/ meetings within & outside the site	Surveys
Basona (Amhara)	Farmers	173	119	389	105
	Extension	24	11	22	2
	Research	18	5	15	11
	Higher learning institutions	11	1	7	2
	CG centers	18	7	24	3
	Others including NGOs	6	2	27	1
Endamehoni (Tigray)	Farmers	398	121	228	175
	Extension	38	12	26	2
	Research	7	7	17	11
	Higher learning institutions	5	4	10	3
	CG centers	14	10	23	11
	Others including NGOs	3	2	28	0
Lemo (SNNPR)	Farmers	372	115	593	241
	Extension	14	13	26	11
	Research	1	5	9	21
	Higher learning institutions	0	2	6	2
	CG centers	0	3	24	5
	Others including NGOs	0	2	16	0
Sinana (Oromia)	Farmers	175	86	422	86
	Extension	16	20	35	2
	Research	9	6	11	4
	Higher learning institutions	8	7	12	3
	CG centers	4	0	16	3
	Others including NGOs	1	2	12	0
	Total	1315	562	1998	704

Site level capacities and facilities

- Assigned full time site and assistant site coordinators



- Link research, higher learning institutions, extension, NGOs, farmers and other actors with CG centers and other interest groups
 - Administer site level operational funds
 - Facilitate operational and strategic IPS
 - Oversee field research and capacity building activities
-
- Equipped with transport, office and communication facilities

Installation of weather stations: 1 per research kebele



5. Scaling technologies and practices, research on scaling and revisiting research protocols- 2015

- Scaling at farm, watershed, kebele and woreda levels
- Some emerging scalable outputs:
 - Crop varieties validated for a range of local conditions (wheat, faba bean, potato)
 - Improved year-round feed storage and management practices (crop residues, multi-purpose intercrops, perennial fodders)
 - Approaches for improved targeting of map-based fertilizer recommendations



Seed potato ready for sell to other farmers in one of the cooperatives supported by the project in Tsibet



A farmer in Tsibet explains the value of oat-vetch forage mixtures



Improved crop residue storage (with shading) introduced by Africa RISING In Endamehoni



Improved cattle feed troughs in Endamehoni



Nine months old protein-rich fodder and fertilizer tree (Lucerne) in Endamehoni



A woman farmer in Emba Hasti bought a motorized water pump with income from her potato sales



An Africa RISING farmer that joined the community faba bean seed production effort is informally distributing seed to other farmers within and outside the Emba Hasti research kebele

Project CG partners- Ethiopia





Local partners- Ethiopia

- **Academic institutions:**
 - Wachemo, Mekelle, Madawolabu, Debre Berhan and Hawassa universities; Maichew Agricultural College
- **Regional research organizations:**
 - Amhara Regional Agricultural Research Institute, Southern Agricultural Research Institute, Tigray Agricultural Research Institute, Oromia Agricultural Research Institute
- **Federal research organizations:**
 - Ethiopian Institute for Agricultural Research, Ethiopian Public Health Institute
- **Offices of Agriculture:**
 - Endamekoni (Tigray), Basona Worena (Amhara), Lemo (SNNRP) and Sinana (Oromia)
- **Private entrepreneurs**
- **NGOs:** GRAD, Hundie, SOS Sahel, Sunarma
- **Agricultural Transformation Agency (ATA)**
- **Innovation laboratories:** ILSSI, IPM IL, Power Africa



Africa RISING program communication tools:

- Website: <http://africa-rising.net/>
- Wiki space: <http://africa-rising.wikispaces.com/events>
- Flickr: <https://www.flickr.com/photos/africa-rising/sets>
- Presentation : <http://www.slideshare.net/africa-rising>
- Documents and out puts : <http://cgspace.cgiar.org/handle/10568/16498>



Thank You

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